

REMARKS

Upon entry of the amendment, claims 1, 2, 6, 7, 11 and 12 are all the claims pending in the application.

Claims 3-5 and 8-10 have been deleted.

Claims 1 and 6 have been amended.

Claims 11 and 12 have been added. Support is found in the original claims and in the first full paragraph of page four of the specification. No new matter has been added.

Claims 4, 5, 9 and 10 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which allegedly was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 4, 5, 9 and 10 are further rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

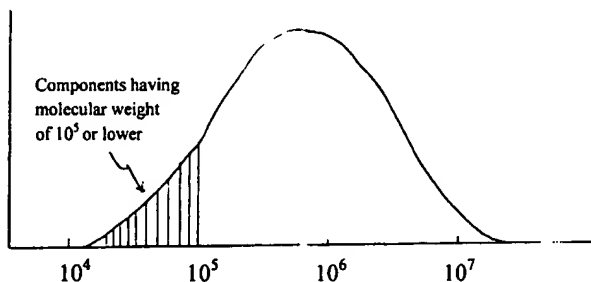
Claims 4, 5, 9 and 10 and the specification were previously amended to correct an inadvertent error in referring to the molecular weight of the low molecular weight components as a "weight average." One skilled in the art, upon reading the original specification, would have understood the different usage of "molecular weight" and "weight average molecular weight," and that "molecular weight" is the proper term from the context of the specification. The molecular weight of the components should simply be defined as a "molecular weight," not as a "weight average" molecular weight. The reason for this is clear to one of ordinary skill in the art as set out below.

A molecular weight is a measure showing a size of a molecule, and in the case of a specific molecule, its molecular weight is unequivocally determined (for example, methanol: 32, ethanol: 46, etc.).

On the other hand, a polymer is an aggregate of molecules having different degrees of polymerization, and comprises molecules having various molecular weights. Therefore, a molecular weight of a polymer having a specific degree of polymerization can clearly be expressed, but to express a molecular weight of a polymer as a whole, an average value of those molecular weight is employed, and a “weight average” molecular weight is one expression for an average value.

The meaning intended throughout the specification and claims is the amount of polymer molecules having a molecular weight of 10^5 or lower that are present with respect to the entire polymer (*see*, GPC chart below). In other words, the molecular weight of 10^5 is a molecular weight of the individual polymer (*i.e.*, a border line).

GPC chart: weight average molecular weight = 10^6



Each of the examples of the present application provide support for the prior amendment to page 4 of the specification. Each example states the proportion of components “having an Mn of 100,000 or less”. *See*, for example, page 11, lines 1-3, with respect to Example 1.

As claims 4, 5, 9 and 10 are canceled in the present amendment, it is respectfully requested that these rejections be withdrawn.

Claims 1, 2, 6 and 7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bamba et al (U.S. 6,224,938).

In response, Applicants respectfully traverse. Neither Bamba nor any other cited reference specifically discloses that Applicants' claimed reaction parameters are result-effective to balance polydispersity and molecular weight of resulting polymers.

Applicants again respectfully submit that Bamba does not disclose or suggest the step of uniformly mixing a monomer mixture and an inert fluid and feeding the resulting mixture to a continuous reactor. The claimed process is directed to a production process wherein a monomer mixture and an inert fluid are previously mixed uniformly by a line mixer, the resulting mixture is supplied to a continuous reactor, and polymerization is performed therein, and Bamba does not contain any disclosure to teach this production process.

In the interest of expediting prosecution, Applicants have amended claims 1 and 6 to incorporate the recitations of claims 4 and 9, respectively.

The characteristic of the present invention is to produce an acrylic pressure-sensitive adhesive comprising 10% by weight or less, based on the weight of the total monomers, of components having a molecular weight of 100,000 or less. Bamba is asserted to disclose that "the residual monomer and low molecular weight components, which have the possibility to lower the pressure-sensitive adhesive properties, can be evaporated off". However, Bamba discloses that those low molecular weight components are evaporated off simultaneously with

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the evaporation of the inert fluid, and the molecular weight is considerably smaller (generally, several hundreds). By contrast, the polymer adhesive obtained in the present invention contains a small amount of components having a molecular weight of 100,000 or less. Thus the claimed invention differs considerably from Bamba.

Because Bamba does not disclose or suggest a production process wherein a monomer mixture and an inert fluid are previously mixed uniformly by a line mixer, the resulting mixture is supplied to a continuous reactor, and polymerization is performed therein. Therefore, the present claims are not disclosed or obvious over Bamba, and it is respectfully requested that the rejection be withdrawn.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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Date: July 18, 2003